

## Description

GM6350 is a group of positive voltage output, three - pin regulators, that provide a high current even when the input/ output voltage differential is small. Low power consumption and high accuracy is achieved through CMOS and programmable fuse technologies. Output voltage: 1.5V to 5.0V.

GM6350 consists a high-precision voltage reference, an error correction circuit, and a current limited output driver. Transient response to load variations have improved in comparison to the existing series.

GM6350 incorporates both over-temperature and over-current protection.

## Features

- ◆ **Maximum output current: 300mA**
- ◆ **Highly accurate: Output voltage  $\pm 2\%$**
- ◆ **Low power consumption.**
- ◆ **Over -Current and Over-Temperature protection**
- ◆ **Small input/ output differential: 0.3V at 300mA**

## Application

Battery- Operated Systems

Portable Computers

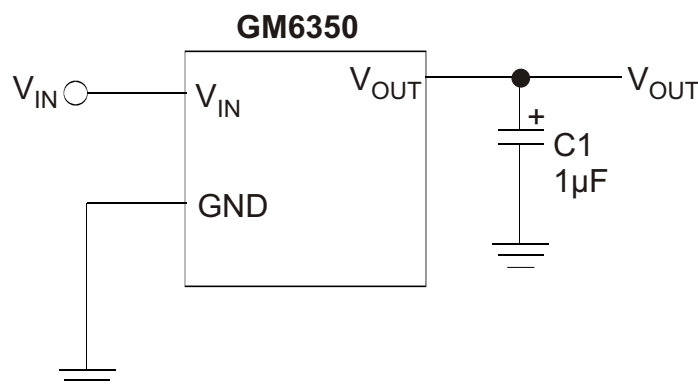
Portable Cameras and Video Recorders

Reference voltage Sources

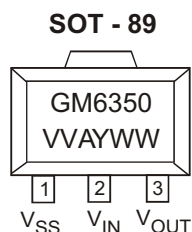
Instrumentation

Pagers

## TYPICAL APPLICATION



### ◆ MARKING INFORMATION & PIN CONFIGURATIONS (TOP VIEW)



VV = Voltage Code  
 A = Assembly Location  
 Y = Year  
 WW = Weekly

### ◆ ORDERING INFORMATION

Ordering Number	Output Voltage	Package	Shipping
GM6350-1.5ST89R	1.5	SOT-89	1,000 Units/ Tape & Reel
GM6350-1.8ST89R	1.8	SOT-89	1,000 Units/ Tape & Reel
GM6350-2.5ST89R	2.5	SOT-89	1,000 Units/ Tape & Reel
GM6350-3.0ST89R	3.0	SOT-89	1,000 Units/ Tape & Reel
GM6350-3.3ST89R	3.3	SOT-89	1,000 Units/ Tape & Reel
GM6350-5.0ST89R	5.0	SOT-89	1,000 Units/ Tape & Reel

\* For detail Ordering Number identification, please see last page.

### ◆ PIN DESCRIPTION

Pin Name	Pin Name	Function
<b>SOT-25</b>		
1	$V_{SS}$	Unregulated Supply Input.
2	$V_{IN}$	Ground Terminal.
3	$V_{OUT}$	Regulated Voltage Output.

### ◆ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNITS
Input Voltage	$V_{IN}$	6.5	V
Output Current	$I_{OUT}$	300	mA
Output Voltage	$V_{OUT}$	$V_{SS} - 0.3 \sim V_{IN} + 0.3$	V
Continuous Total Power Dissipation	SOT-89 $P_D$	500	mW
Operating Ambient Temperature	$T_{OPR}$	-30 ~ +80	°C
Storage Temperature	$T_{STG}$	-40 ~ +125	°C

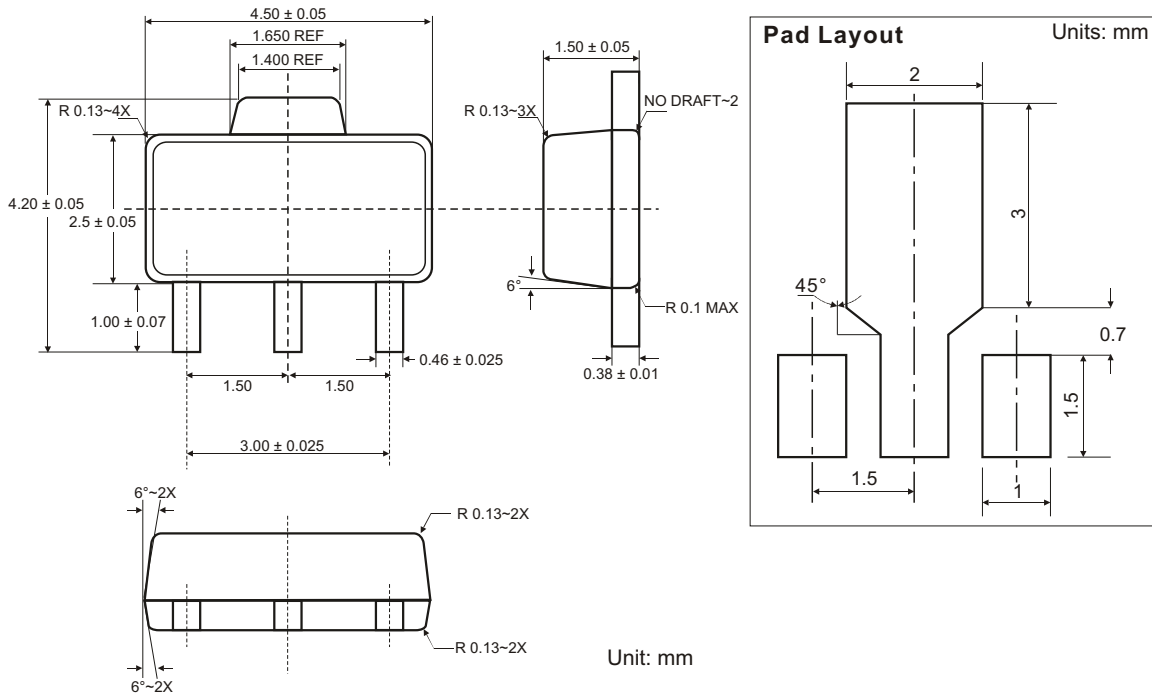
### ◆ ELECTRICAL CHARACTERISTICS

( $T_A = 25^\circ\text{C}$ ,  $V_{IN} = V_{OUT}$  (nominal) + 0.5V, unless otherwise noted)

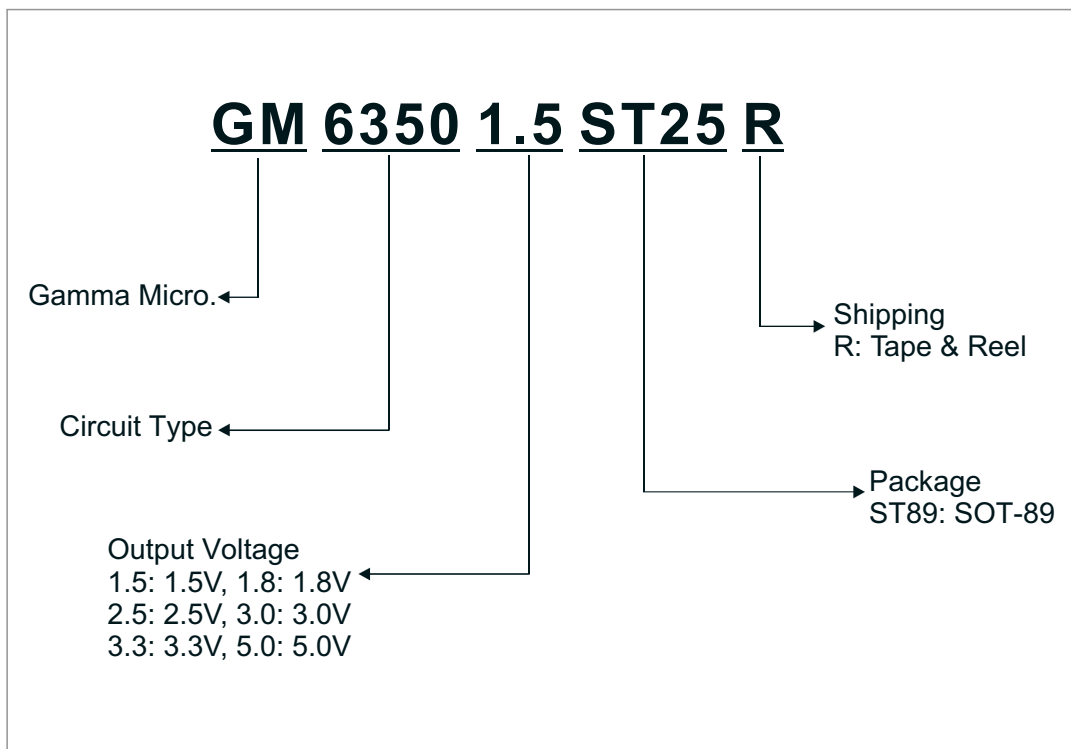
Parameter	Test Condition	Min	Typ	Max	Units	Test Circuit
Output Voltage Accuracy	$I_O = 1\text{mA}$ , $I_O = 0.1 \dots 300\text{mA}$	-1.4 -3%		+1.4% +2%	V	
Line Regulation $V_{OUT}/V_{IN} \cdot V_{OUT}$	$I_O = 1\text{mA}$ , $(V_{OUT} + 0.1\text{V}) < V_{IN} \leq 6.5\text{V}$		0.1	0.3	%/V	1
Load Regulation (Note 1)	$V_{IN} = 6\text{V}$ , $0.1\text{mA} < I_O < 300\text{mA}$ , $C_{OUT} = 1\mu\text{F}$		0.005	0.04	%/mA	2
Maximum Output Current	$V_{IN} = 5\text{V}$ , $V_{OUT} > 0.96 \cdot V_{rating}$	300	500		mA	
Current Limit		400			mA	
Ground Pin Current	$I_{OUT} = 0 \dots 300\text{mA}$		15	30	$\mu\text{A}$	3
Dropout Voltage for $V_{OUT} > 2.5\text{V}$	$I_O = 100\text{mA}$		100	180	mV	
	$I_O = 300\text{mA}$		300	550		
for $2.0\text{V} < V_{OUT} \leq 2.5\text{V}$	$I_O = 100\text{mA}$		150	300		
	$I_O = 300\text{mA}$		450	800		
for $V_{OUT} \leq 2.5\text{V}$	$I_O = 100\text{mA}$		200	400		
	$I_O = 300\text{mA}$		600	1100		

Note 1: Load Regulation is measured using pulse techniques with duty cycle <5%



◆ SOT-89 PACKAGE OUTLINE DIMENSIONS



◆ ORDERING NUMBER



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